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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/427,260	10/25/99	KHOSRAVI	F 239/227
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QM12/1011

EXAMINER

PELLEGRINO, B

ART UNIT

PAPER NUMBER

3738

DATE MAILED:

10/11/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/427,260

Applicant(s)

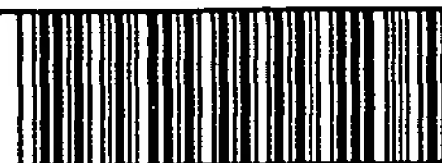
Khosravi et al.

Examiner

Brian Pellegrino

Group Art Unit

3738



☒ Responsive to communication(s) filed on Oct 25, 1999

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1-50 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-50 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☒ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☒ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been
☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____.

☒ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 2

☐ Interview Summary, PTO-413

☒ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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DETAILED ACTION

Priority

1. This application filed under former 37 CFR 1.60 lacks the necessary reference to the prior application. A statement reading "This is a CIP of Application No. 09/192,977, filed 11/16/98." should be entered following the title of the invention or as the first sentence of the specification. Also, the current status of all nonprovisional parent applications referenced should be included.

Specification

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and **generally limited to** a single paragraph on a separate sheet within the range of 50 to **250 words**. It is important that the abstract not exceed 250 words in length **since the space provided** for the abstract on the computer tape used by the printer is **limited**. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The **language should** be clear and concise and should **not repeat information given in the title**. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

3. The abstract of the disclosure is objected to because it is too lengthy. Correction is required. See MPEP § 608.01(b).

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Claim Rejections - 35 U.S.C. § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371© of this title before the invention thereof by the applicant for patent.

5. Claims 1-24, 29, 30, 44-45 are rejected under 35 U.S.C. 102(b) as being anticipated by Khosravi et al. (5441515). Figs. 4, 9, 18 show embodiments of a coiled sheet stent having overlapping inner and outer sections. Figure 12 shows that the stent can be formed of stretchable elements.

With respect to method claims 44 and 45 the method is taught by Khosravi et al. in col. 7, lines 1-20 in which a sheath holds the stent in a contracted state and a hot balloon catheter causes expansion of the stent and when at the target location in a body lumen the stretchable elements expand. See col. 8, lines 44-49 where deployment of the stent engages the vessel wall.

6. Claims 31-42 are rejected under 35 U.S.C. 102(e) as being anticipated by Martin et al. (6042605). Martin et al. teach that a sheet of nitinol can be used to make a coiled sheet stent, col. 11, lines 1-17 and Fig. 15D. With respect to claim 33 and the step of heat treating to program the shape into the shape memory material, see col. 13, lines 15-16. Regarding claims 37-39 and 41,

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they teach that the sheet or stent is cooled before the sheet or elements forming the stent are formed, col. 15, lines 9-13. With respect to claim 42, see col. 9, lines 1-4.

Claim Rejections - 35 U.S.C. § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Khosravi et al. in view of Duerig et al. (6086610). Khosravi et al. is explained as above. However, what they fail to teach is to form the stretchable elements as diamond-shaped. Duerig et al. teach (col. 4, lines 1-43) that a shape memory alloy stent can be formed with an open lattice structure of diamond-shaped cells for ease of deformation. It would have been obvious to one of ordinary skill in the art to modify the stent of Khosravi et al. and incorporate the teachings of Duerig et al. to have diamond-shaped elements forming the stent.

9. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Khosravi et al. in view of Lam (5649952). Khosravi et al. is explained as before. However, what they fail to teach is to suggest an alternative open lattice structure. Lam shows (Fig. 7) an expandable stent that comprises zigzag elements with a plurality of longitudinal elements intersecting the zigzag elements. It would have been obvious to one of ordinary skill in the art to modify the stent of

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Khosravi et al. and incorporate the teaching of Lam to have a serpentine pattern and connecting members to compensate for the stresses of expansion.

10. Claims 46-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Khosravi et al. in view of Jang (5954743). Khosravi et al. teaches to make a tubular stent from a coiled sheet, col. 5, lines 14-27 and Fig. 12. They also teach that the stent is biased to assume an enlarged condition, col. 6, lines 43-49. However, what they fail to teach is to vary the width and thickness of the "struts" of the honeycomb structure. Jang teaches that strut thickness and width can be varied to alter flexibility of the stent, col. 8, lines 1-12. It would have been obvious to one of ordinary skill in the art to modify the stent of Khosravi et al. and have a thickness dimension extending radially outward such that its ratio to the width is greater than one as taught by Jang for increased flexibility.

11. Claim 43 is rejected under 35 U.S.C. 103(a) as being unpatentable over Martin et al. in view of Khosravi et al. Martin et al. is explained as before. However, what they fail to teach is to provide locking elements along an edge of the sheet forming the stent. Khosravi et al. teach that means for locking a coiled sheet that is folded to overlap inner and outer sections. It would have been obvious to one of ordinary skill in the art to modify the stent of Martin et al. and provide means to lock overlapping sections of a coiled sheet as taught by Khosravi et al. As a result it secures the stent in a locked position to prevent it from collapsing.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Pellegrino whose telephone number is (703) 306-5899. The examiner can normally be reached on Monday-Thursday from 7:30am to 5pm. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Isabella, can be reached on (703) 308-3060. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-2708.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0858.

Brian E. Pellegrino

Brian E. Pellegrino
10/9/00


Michael J. Milano
Primary Examiner
TC 3700, AU 3738